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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,877	02/09/2006	John Edward Hill	20912103855	2388
28886	7590	09/24/2007		
CLARK HILL, P.C. 500 WOODWARD AVENUE, SUITE 3500 DETROIT, MI 48226			EXAMINER EVANS, GEOFFREY S	
			ART UNIT 1725	PAPER NUMBER
			MAIL DATE 09/24/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/567,877

Applicant(s)

HILL, JOHN EDWARD

Examiner

Geoffrey S. Evans

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 4 and 5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4, and 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takasago et al. in Japan Patent document No. 2001-162,387 in view of Hayashi in U.S. Patent No. 5,284,043 and Seki et al. in U.S. Patent No. 6,189,361 or Uebayasi et al. in U.S. Patent No. 4,005,991. Takasago et al. discloses providing coated sheets of metal (see paragraph 6), punching at least one embossment on at least one coated metal sheet, the embossment comprising a depression having a raised peripheral edge (element 15, see figure 2) and applying a laser beam (element 20), wherein the gases produced during the forming of the weld escape via the at least one embossment. Takasago et al. does not teach using a lance to form the embossment. Hayashi teaches forming a protusion by embossing or lancing (e.g. see abstract) is an art recognized equivalent. Seki et al. teaches using a lance to form protusions (see figure 3B) by lancing that does not go through the workpiece. Alternatively Uebayasi et al. teaches using a lance (element 10) to form depressions with raised peripheral edges (see figure 2). It would have been obvious to adapt Takasago et al. in view of Hayashi and Seki et al. or Uebayasi et al. to provide this as an art recognized equivalent method of forming a depression having a raised peripheral edge.

Art Unit: 1725

3. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takasago et al. in Japan Patent document No. 2001-162,387 in view of Hayashi in U.S. Patent No. 5,284,043 and Seki et al. or Uebayasi et al. as applied to claim 1 above, and further in view of Mori et al. in Japan Patent No. 4-279,291. Mori et al. teaches forming an array of embossments (see elements 33,34,35 and 36 in figure 4). It would have been obvious to adapt Takasago et al. in view of Hayashi, Mori et al. and Seki et al. or Uebayasi et al. to provide this to ensure proper venting of the gases during laser welding. Regarding claim 5, determining the proper height of the raised peripheral edge to achieve good welding results along with venting of the gases produced by laser welding is considered a matter of routine experimentation in the absence of evidence of unexpected results.

4. Applicant's arguments filed 6 September 2007 have been fully considered but they are not persuasive. Please note that the coated metal sheet must have some backing support such as a table or otherwise the sheet would merely move upon being struck by the lance. The newly cited Seki et al. and Uebayasi et al. references disclose using a lance to create a protrusion while the surface of the workpiece remains continuous and uninterrupted.


5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Uebayashi et al. in U.S. Patent No. 3,862,561 discloses as shown in figure 5 creating depressions and protusions. Ota et al. in U.S. Patent No. 6,314,785 discloses as shown in figure 10 creating a depression and an associated protusion.

Art Unit: 1725

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey S. Evans whose telephone number is (571)-272-1174. The examiner can normally be reached on Mon-Fri 6:30AM to 4:00 PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571)-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Geoffrey S Evans  
Primary Examiner  
Art Unit 1725

GSE